

Scirtidae of the Oriental Region, Part 11. Notes on the *Cyphon coarctatus* Species Group (Coleoptera), with Descriptions of New Species

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Abstract The Oriental species of the *coarctatus* species-group of the genus *Cyphon* are reviewed. Two new subgroups, the *tetranematus* and the *formosanus* are newly proposed. Following nine new species, and three known species on the basis of additional specimens are described or redescribed: *C. montipanus* sp. nov. (Laos); *C. nobuoi* sp. nov. (Indonesia); *C. muluensis* sp. nov. (Malaysia); *C. sadanarii* sp. nov. (Vietnam); *C. nepalensis* sp. nov. (Nepal); *C. brevirostris* sp. nov. (Nepal); *C. masahiroi* sp. nov. (Nepal); *C. baoshanensis* sp. nov. (China); *C. tetranematus* sp. nov. (Thailand); *Cyphon unipunctatus* KLAUSNITZER, 1980 (Philippines); *C. litigiousus* KLAUSNITZER, 1980; *C. maculipennis* KLAUSNITZER, 1968 (Nepal, new record).

Introduction

The genus *Cyphon* PAYKULL, 1799 is the largest genus in the family Scirtidae represented by ca 350 species from all over the world. A number of species-groups have been proposed in the genus (NYHOLM, 1972; YOSHITOMI, 2005), but the monophyly of the genus is doubtful.

The *coarctatus* species group (sensu NYHOLM, 1972) is the typical species-group in the genus *Cyphon* characterized by the following features of the male genitalia: tergites VIII–IX normal plate-like; sternite IX variable in shape; tegmen and penis generally normal in shape, not degenerative. NYHOLM (1972) divided the species-group into two subgroups, and YOSHITOMI (2005) followed him. Later, KLAUSNITZER (2005a, 2006) divided this species-group into 12 subgroups mainly based on the shapes of sternite IX.

KLAUSNITZER (2005a, 2006) recorded 21 species in 10 subgroups from the Oriental Region. In the present study, I would like to review the *coarctatus* species-group of the genus *Cyphon* of the Oriental region.

Materials and Methods

The specimens used in this study are preserved in the following museums and institutes: Naturhistorisches Museum Wien, Austria (NMW); Entomological Laboratory, Ehime University, Matsuyama, Japan (EUMJ); Kyushu University Museum, Japan (KUMJ); Collection of Dr. Andreas PÜTZ, Eisenhüttenstadt, Germany (CPE).

Methodology and technical terms should refer to YOSHITOMI (2005). The term “apical teeth” is used for a pair of projection (= centema) protruding from trigonium. The subgroups in the species-group mainly follow KLAUSNITZER (2005a).

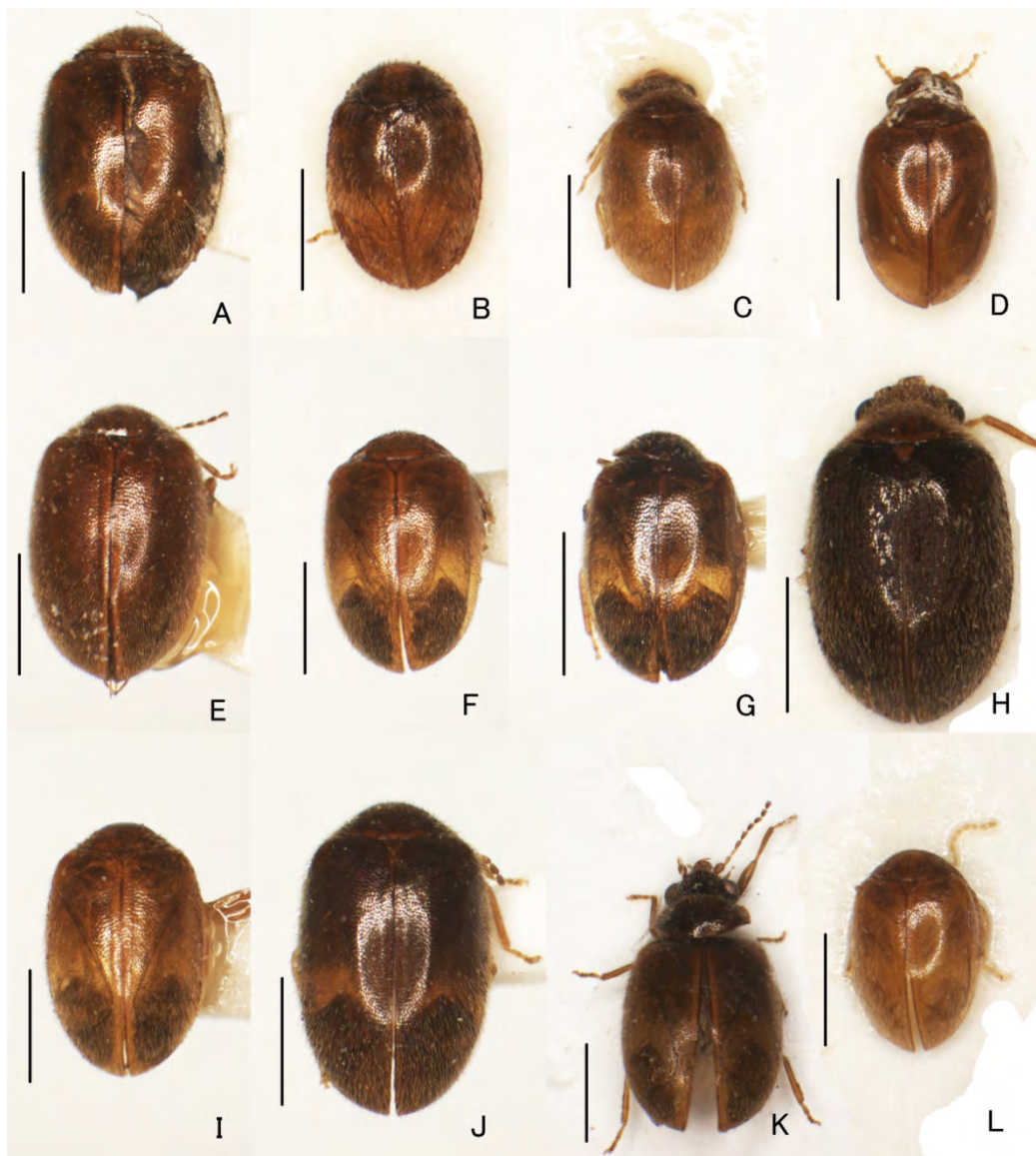


Fig. 1. Habitus of *Cyphon* spp. — A, *C. montipanus* sp. nov. (HT); B, *C. nobuoi* sp. nov. (HT); C, *C. muluensis* sp. nov. (HT); D, *C. sadanarii* sp. nov. (HT); E, *C. nepalensis* sp. nov. (HT); F, *C. brevirostris* sp. nov. (HT); G, *C. masahiroi* sp. nov. (HT); H, *C. unipunctatus* KLAUSNITZER; I, *C. litigiosus* KLAUSNITZER; J, *C. maculipennis* KLAUSNITZER; K, *C. baoshanensis* sp. nov. (HT); L, *C. tetranematus* sp. nov. (HT). HT = holotype; scales = 1.0 mm.

Abbreviations for measurements used in the present paper are as follows: PL—mesal length of pronotum; PW—maximum width of pronotum; EL—length of elytra at suture; EW—maximum width of elytra; TL—total length (PL plus EL). The arithmetic means of the measurement are given in parenthesis after the range.

Taxonomy

1. The *puncticeps* subgroup

This subgroup consisted of three Palaearctic and Oriental species (KLAUSNITZER, 2005a), of these *Cyphon inustulatus* KLAUSNITZER, 1980 is recorded from Vietnam belonging to the Oriental region. In the present paper, one new species is added from Laos. The subgroup is characterized by having tergite VIII tapered distally and serrate in apical part.

Cyphon montipanus sp. nov.

(Figs. 1A, 2, 3)

Type materials. Holotype (EUMJ), male: “Phu Pan (Mt.) Houaphan Prov. LAOS 4. V. 2002 H. Yoshitomi leg.”. Paratypes: 4 males & 1 female (EUMJ, NMW), same data as for the holotype, genitalia on slides nos. HY 756, 765, 785.

Description. Male. Body oval, strongly convex dorsally, shining, closely covered with yellowish-white setae throughout. Coloration of head, mouth parts, antennae, pronotum and legs pale brown; elytra and ventral surface of body dark brown, but paler in humeral parts and surrounding parts of elytral sutures.

Head moderate in size, slightly convex above, finely granulate on dorsal surface; anterior margin of clypeus gently arcuate. Eyes moderate in size, weakly prominent; the distance between eyes about 3.0 times as long as the maximum diameter of an eye. Antennae short, reaching about proximal 1/4 of elytra. Pronotum transverse, finely granulate; anterior and lateral margins straight; antero-lateral corners distinctly projecting forward, right-angled; postero-lateral corners about 120°; posterior margin gently and evenly arcuate; PW/PL 2.21–2.50 (2.35). Scutellum equilateral-triangular, finely punctate. Elytra strongly convex above, ovate, widest at middle, gently elevated in humeri; EL/EW 1.22–1.27 (1.24); EL/PL 4.30–5.00 (4.65); EW/PW 1.58–1.63 (1.60); TL/EW 1.48–1.52 (1.51)

Caudal margin of sternite VII (Fig. 2A) arcuate. Tergite VIII (Fig. 2B) well sclerotized, elongate-subtriangular, strongly serrate in lateral margin, bearing short spines on apical margin, with a pair of robust apodemes; tergite IX (Fig. 2C) widely membranous, but lightly sclerotized in postero-lateral parts and apodemes; sternite IX (Fig. 2D) moderately sclerotized, fan-shaped, bearing short setae in apical part. Tegmen (Fig. 2E) relatively large, lightly sclerotized; basal part long, parameres widest at middle, hexagonal, bearing relatively long setae in lateral parts. Penis (Fig. 2F) well sclerotized, as long as tegmen; pala ovate, widest at basal 1/3, almost straight in basal margin; apical teeth small, almost straight.

Female. Sexual dimorphism indistinct; PW/PL 2.26; EL/EW 1.36; EL/PL 4.90; EW/PW 1.59; TL/EW 1.64. Caudal margin of sternite VII gently arcuate. Tergite VIII (Fig. 3A) moderately sclerotized, trapezoidal, bearing short spines on apical margin, covered sparsely with minute setae in apical part, with a pair of long and slender apodemes; sternite VIII (Fig. 3B) slightly sclerotized, oblong, bearing short setae in apical part. Ovipositor (Fig. 3C) long; approximate ratio of stylus, coxite and baculus as 1.0 : 8.0 : 35.5. Prehensor (Fig. 3D) small, well sclerotized, bearing about 60 pairs of long spines.

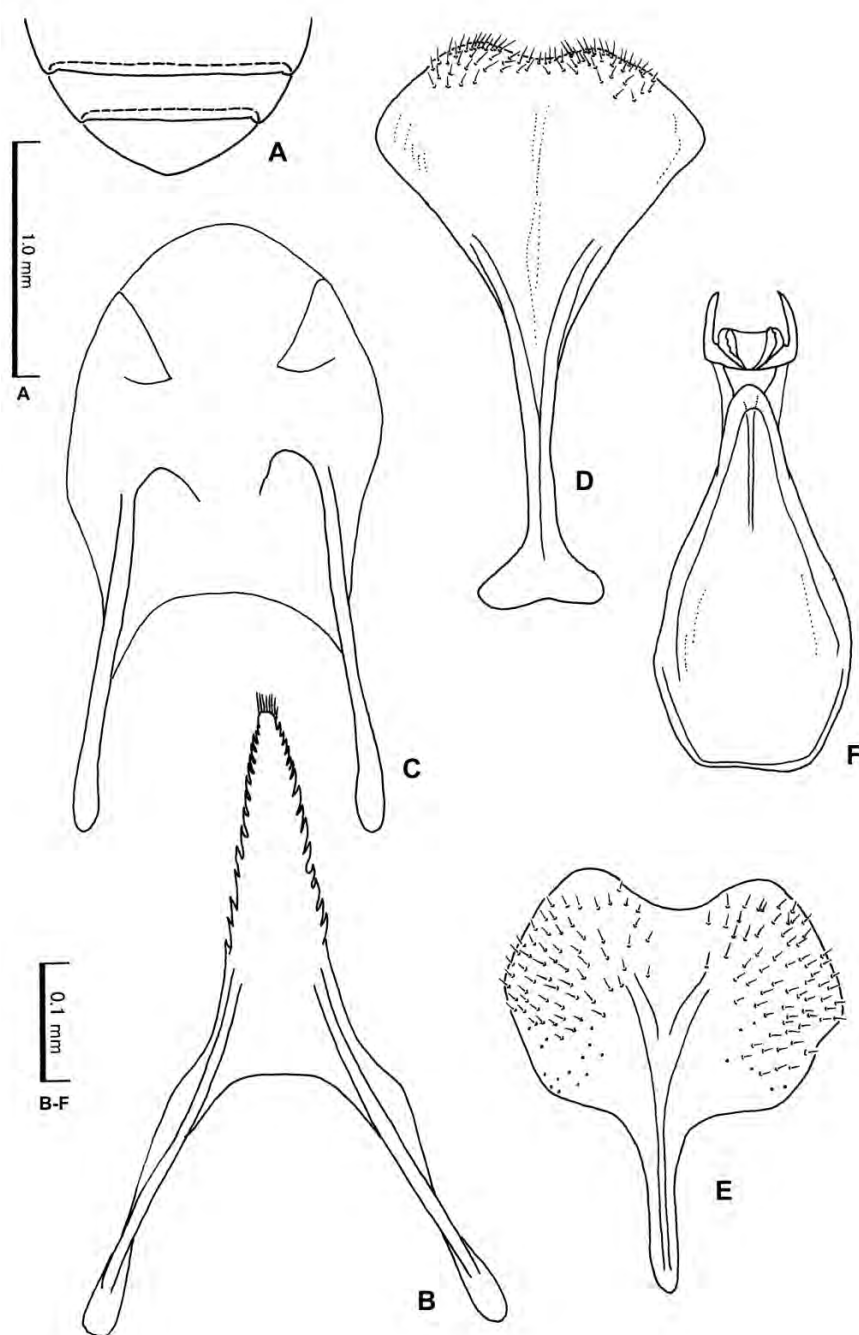


Fig. 2. *Cyphon montipanus* sp. nov., holotype, male. — A, Sternites V–VII; B, tergite VIII; C, tergite IX; D, sternite IX; E, tegmen; F, penis.

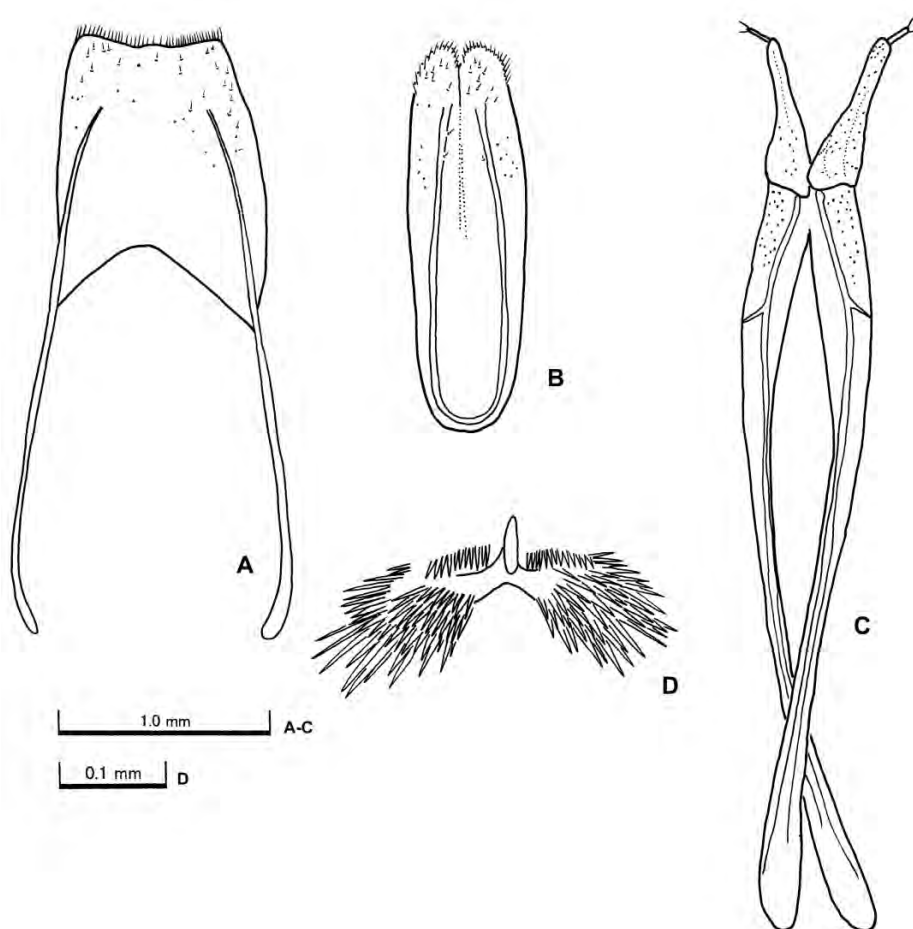


Fig. 3. *Cyphon montipanus* sp. nov., paratype, female. — A, Tergite VIII; B, sternite VIII; C, ovipositor; D, prehensor.

Measurements. Male ($n = 3$): TL 2.28–2.40 (2.35) mm; PW 0.95–1.00 (0.98) mm; PL 0.40–0.43 (0.42) mm; EL 1.85–2.00 (1.93) mm; EW 1.50–1.60 (1.56) mm. Female ($n = 1$): TL 2.95 mm; PW 1.13 mm; PL 0.50 mm; EL 2.45 mm; EW 1.80 mm.

Distribution. Laos.

Remarks. Judging from the characteristics of the male genitalia, this species is related to *Cyphon inustulatus* KLAUSNITZER, 1980 and *Cyphon puncticeps* KIESENWETTER, 1874, and is distinguished from them by the shapes of tergite VIII and the penis.

Etymology. The species is named after the type locality, Phu (= Mt.) Pan.

2. The *ochraceus* subgroup

This subgroup consisted of four Holarctic and Oriental species (KLAUSNITZER, 2005a, b), of these *Cyphon unidentatus* KLAUSNITZER, 2005 is recorded from Guanxi, China of the Oriental Region. This subgroup is characterized by the indistinct apical teeth of the penis. No species is available in this study.

3. The *asymmetricus* subgroup

This subgroup is provided for *Cyphon asymmetricus* KLAUSNITZER, 1973 known from Vietnam, and characterized by the asymmetrical apical teeth of the penis. No species is available in this study.

4. The *carus* subgroup

This subgroup consisted of five Oriental species (KLAUSNITZER, 2005a, b), i.e. *Cyphon carus* KLAUSNITZER, 1980 (Malaysia), *Cyphon setulosus* KLAUSNITZER, 1973 (Philippines: Tawi Tawi), *Cyphon postcornutus* KLAUSNITZER, 1973 (Philippines: Luzon), *Cyphon mangolensis* KLAUSNITZER, 1980 (Sula Isl.), and *Cyphon pilumnus* KLAUSNITZER, 1980 (Indonesia: Sumatra). This subgroup is characterized as follows: 1) sternite IX large, with two pairs of distinct projections, with short basal part; 2) apical teeth of penis curved, claw-like. In the present paper, four new species from Indonesia, Malaysia, Vietnam and Nepal are added.

Cyphon nobuoi sp. nov.

(Figs. 1B, 4)

Type material. Holotype (NMW), male: “INDONESIA – Jawa Telukoage 1. 2. 1994 leg. I. Jenis”. Paratypes (NMW, EUMJ): 9 males, “INDONESIA, SE-Sulawesi Rawa Aopa Nat. Park Aopa vill. 8-10. 2. 1994 leg. M. Strba & I. Jenis”.

Description. Male. Body oval, convex dorsally, shining, closely covered with yellowish-white setae throughout. Coloration of body brown to blackish-brown, but antennae, mouth parts, and legs paler.

Head relatively large, slightly convex above, finely granulate on dorsal surface; clypeus short and wide, front margin straight. Eyes relatively large, prominent; the distance between eyes about 2.1 times as long as the maximum diameter of an eye. Antennae short and slender, reaching about proximal 1/4 of elytra. Pronotum transverse, finely granulate; anterior and lateral margins straight; antero-lateral corners obtuse, weakly projecting forward; postero-lateral corners about 120°; posterior margin gently arcuate; PW/PL 2.13. Scutellum equilateral-triangular, finely punctate. Elytra oval, strongly convex above, widest at middle; humeri gently elevated; EL/EW 1.19; EL/PL 3.63; EW/PW 1.44; TL/EW 1.52.

Caudal margin of sternite VII gently arcuate. Tergite VIII (Fig. 4A) wide, lightly sclerotized, trapezoidal, bearing short spines in apical part, with a pair of short apodemes. Tergite IX (Fig. 4B) lightly sclerotized, shallowly concave in caudal margin, closely covered with minute spines in apical part, bearing short spines on caudal margin. Sternite IX (Fig. 4C) well sclerotized, transversal, with two pairs of long projections protruding from lateral parts; basal part short; proximal projections protruding postero-laterally, expanded apically; caudal projections long, protruding postero-laterally, sparsely punctate with minute spines in apical parts, pointed at apices; a pair of small peg-like projections protruding from dorsal part; caudal part obtuse, sparsely punctate. Tegmen (Fig. 4D) small, well sclerotized; basal part transverse, straight in basal margin; parameres projecting laterally, closely covered with short setae. Penis (Fig. 4E) long, well sclerotized in lateral parts, about 1.2 times as long as tegmen; pala subparallel-sided, then widened apically, shallowly concave in basal margin; apical teeth short and slender, curved inwardly.

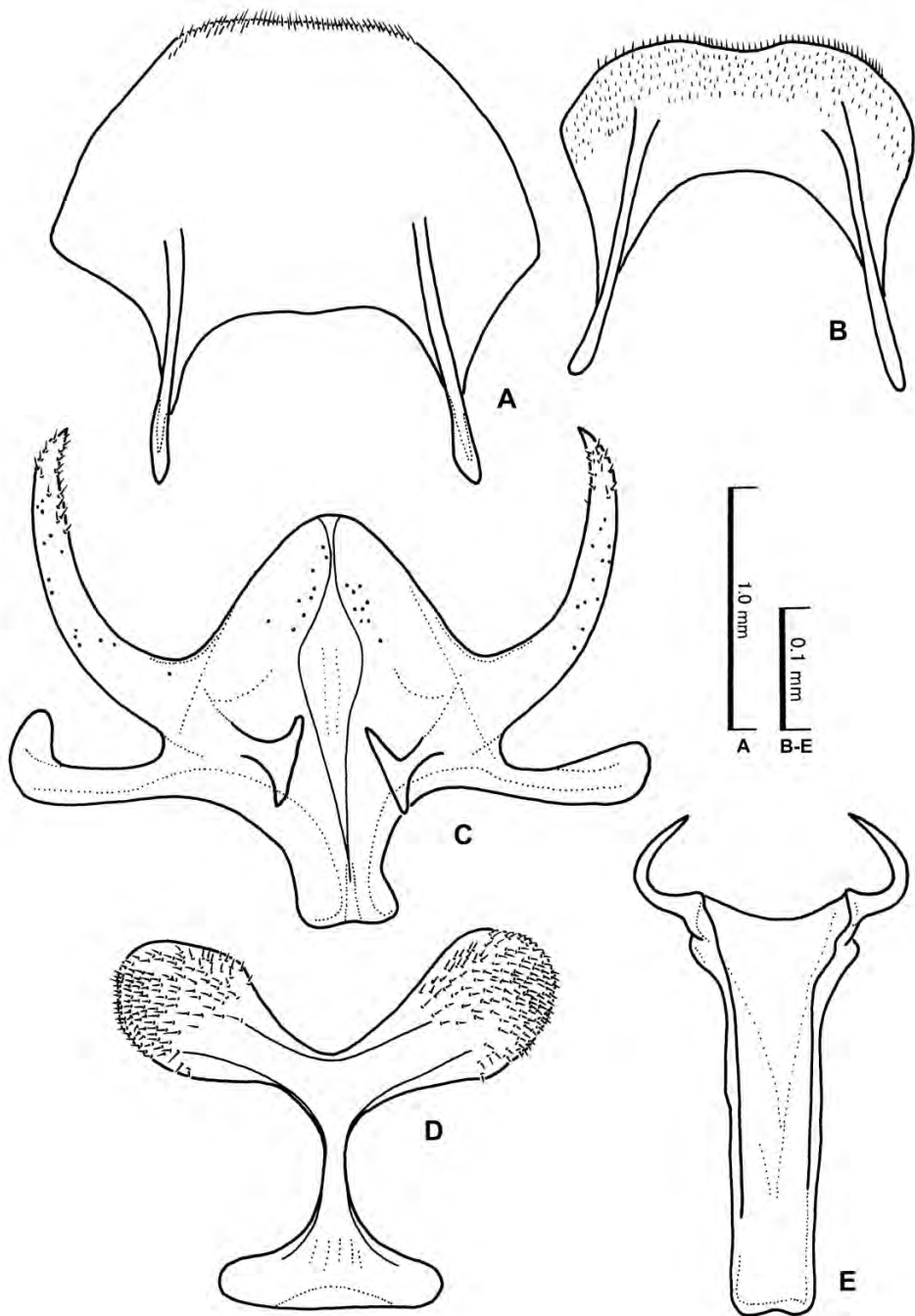


Fig. 4. *Cyphon nobuoi* sp. nov., holotype, male. — A, Tergite VIII; B, tergite IX; C, sternite IX; D, tegmen; E, penis.

Female. Unknown.

Measurements. Male (n = 1): TL 1.85 mm; PW 0.85 mm; PL 0.40 mm; EL 1.45 mm; EW 1.22 mm.

Distribution. Indonesia (Jawa and Sulawesi Isls.).

Remarks. This species is related to *Cyphon setulosus* KLAUSNITZER, 1973, and differs from it as follows: 1) sternite IX more transverse, with a pair of peg-like projections on dorsal surface (lack the projections on dorsal surface in *C. setulosus*); 2) tegmen transverse in basal part and parameres (not transverse in *C. setulosus*); 3) apical teeth curved inwardly (almost straight in *C. setulosus*).

Etymology. This species is dedicated to Dr. Nobuo OHBAYASHI in celebration of his retirement from EUMJ.

***Cyphon muluensis* sp. nov.**

(Figs. 1C, 5)

Type material. Holotype (NMW), male: "MALAYSIA, Sarawak Mulu NP (14 d) 3–5. 3. 1993 leg. H. Zettel".

Description. Male. Body oval, convex dorsally, shining, closely covered with yellowish-white setae throughout. Coloration of body brown; legs pale brown.

Head relatively large, slightly convex above, finely punctate; clypeus short, front margin arcuate. Eyes large, prominent; the distance between eyes about 3.2 times as long as the maximum diameter of an eye. Pronotum transverse, finely punctate, strongly depressed ventrally in lateral parts; anterior and posterior margins slightly arcuate; lateral margins straight; antero-lateral corners right-angled, slightly projecting anteriorly; postero-lateral corners about 120°; PW/PL 2.20. Scutellum equilateral-triangular, finely punctate. Elytra oval, strongly convex above mesally, widest at middle; humeri gently elevated; EL/EW 1.25; EL/PL 3.75; EW/PW 1.36; TL/EW 1.58.

Caudal margin of sternite VII (Fig. 5A) arcuate. Tergites VIII–IX trapezoidal. Sternite IX (Fig. 5B) well sclerotized in lateral parts; basal part oblong; a pair of lateral projections protruding antero-laterally; a pair of long projections protruding posteriorly, curved inwardly, covered with shallow and large concavities in apical parts, sparsely punctate in basal parts. Tegmen (Fig. 5C) large, moderately sclerotized; basal part long, evenly tapered basally; parameres wide, covered with minute setae in basal parts. Penis (Fig. 5D) long, moderately sclerotized, as long as tegmen; pala oblong, tapered posteriorly, basal margin arcuate; apical teeth short, slender, curved inwardly, pointed at apices.

Female. Unknown.

Measurements. Male (n = 1): TL 1.90 mm; PW 0.88 mm; PL 0.40 mm; EL 1.50 mm; EW 1.20 mm.

Distribution. Malaysia.

Remarks. This species is related to *Cyphon carus* KLAUSNITZER, 1980, and differs from it as follows: 1) sternite IX subparallel-sided in basal part (tapered basally in *C. carus*), clearly curved inwardly in caudal projections (slightly curved in *C. carus*); 2) tegmen with wide parameres (narrow in *C. carus*); 3) penis tapered posteriorly in pala (subparallel-sided in *C. carus*), with short and slender apical teeth (long and stout in *carus*).

Etymology. The species is named after the type locality, Mulu National Park.

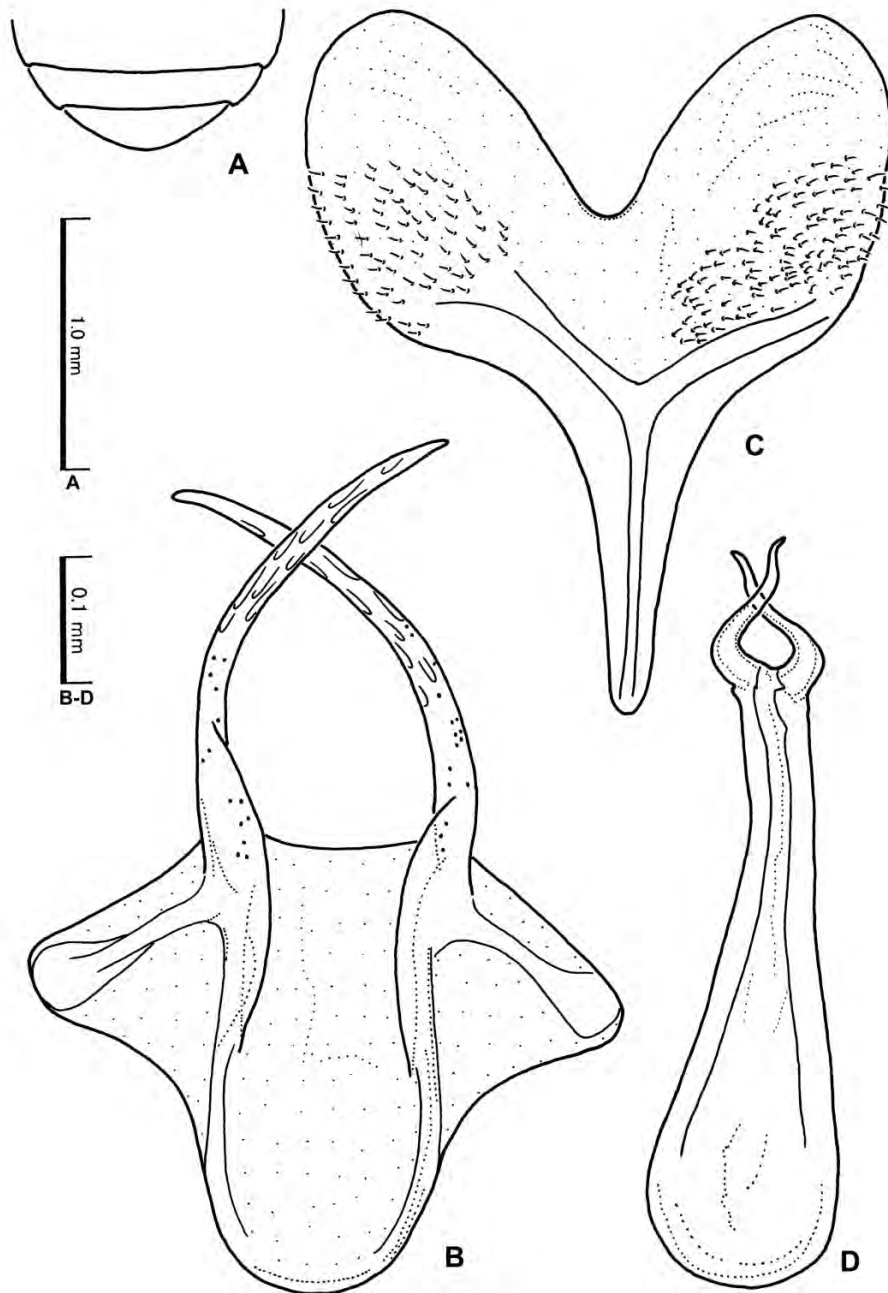


Fig. 5. *Cyphon muluensis* sp. nov., holotype, male. — A, Sternites V–VII; B, sternite IX; C, tegmen; D, penis.

Cyphon sadanarii sp. nov.

(Figs. 1D, 6, 7)

Type material. Holotype (NMW), male: "S-VIETNAM Nam Cat Tien Nat. Park 1 – 15. 5. 1994 Pacholatko & Dembicky". Paratypes (NMW, EUMJ): 14 males & 58 females, same data as for the holotype.

Description. Body oval, convex above, shining, closely covered with yellowish-white setae throughout. Coloration of body brown; antennae, mouth parts, and legs pale brown.

Head relatively large, slightly convex above, finely punctate; clypeus short, straight in front margin. Eyes moderate in size, prominent; the distance between eyes about 2.6 times as long as the maximum diameter of an eye. Antennae short and slender, reaching at proximal margin of elytra. Pronotum transverse, punctate as on head, strongly depressed in lateral parts; anterior and posterior margins slightly arcuate; lateral margins straight; antero-lateral corners right-angled, slightly projecting anteriorly; postero-lateral corners about 120°; PW/PL 1.98–2.38 (2.17). Scutellum equilateral-triangular, punctate as in head. Elytra oval, strongly convex above mesally, widest at middle; humeral parts slightly elevated; EL/EW 1.29–1.34 (1.31); EL/PL 3.44–4.20 (3.80); EW/PW 1.32–1.37 (1.34); TL/EW 1.62–1.69 (1.65)

Caudal margin of sternite VII (Fig. 6A) arcuate. Tergite VIII (Fig. 6B) moderately sclerotized, wide, bearing short spines in apical part, with a pair of long apodemes protruding near antero-lateral corners; tergite IX (Fig. 6C) lightly sclerotized, trapezoidal, bearing short spines on apical margin, with a pair of long and slender apodemes; sternite IX (Fig. 6D) well sclerotized, U-shaped, pointed at apices, covered with minute setae and large shallow concavities in apical parts. Tegmen (Fig. 6E) moderately sclerotized, long, about 0.6 times as long as penis; parameres closely covered with minute setae, which are stout in lateral parts. Penis (Fig. 6F) moderately sclerotized, large; pala oblong, widest at base, evenly tapered posteriorly; apical teeth long and slender, strongly curved inwardly.

Female. Sexual dimorphism indistinct; PW/PL 1.89–2.20 (2.06); EL/EW 1.25–1.34 (1.29); EL/PL 3.51–4.20 (3.81); EW/PW 1.39–1.47 (1.43); TL/EW 1.56–1.68 (1.63). Caudal margin of sternite VII (Fig. 7A) arcuate. Tergite VIII (Fig. 7B) moderately sclerotized, trapezoidal, bearing short spines along apical margin, covered sparsely with minute setae and punctures in apical part, with a pair of long and slender apodemes; sternite VIII (Fig. 7C) slightly sclerotized, oblong, bearing short spines on apical margin and mesal part. Ovipositor (Fig. 7D) long; approximate ratio of stylus, coxite and baculus, 1.0 : 5.3 : 23.5. Prehensor (Fig. 7E) large, well sclerotized, consisting of a large plate and about 100 pairs of long and short spines, serrate in anterior margin of plate.

Measurements. Male (n = 5): TL 1.93–2.25 (2.10) mm; PW 0.90–1.00 (0.95) mm; PL 0.40–0.50 (0.44) mm; EL 1.53–1.75 (1.66) mm; EW 1.19–1.33 (1.27) mm. Female: TL 1.83–2.18 (2.02) mm; PW 0.83–0.92 (0.87) mm; PL 0.38–0.48 (0.42) mm; EL 1.45–1.70 (1.60) mm; EW 1.15–1.30 (1.24) mm.

Distribution. Vietnam.

Remarks. This species together with the next new species can be easily distinguished from all the members of the subgroup in having a U-shaped sternite IX (= very short in basal part and lateral projections). It seems that the character state of sternite IX in these species is apomorphic.

This species was collected together with an undescribed *Cyphon* sp., which is a member of the *variabilis* species-group, and only differs from it by the structures of male genitalia.

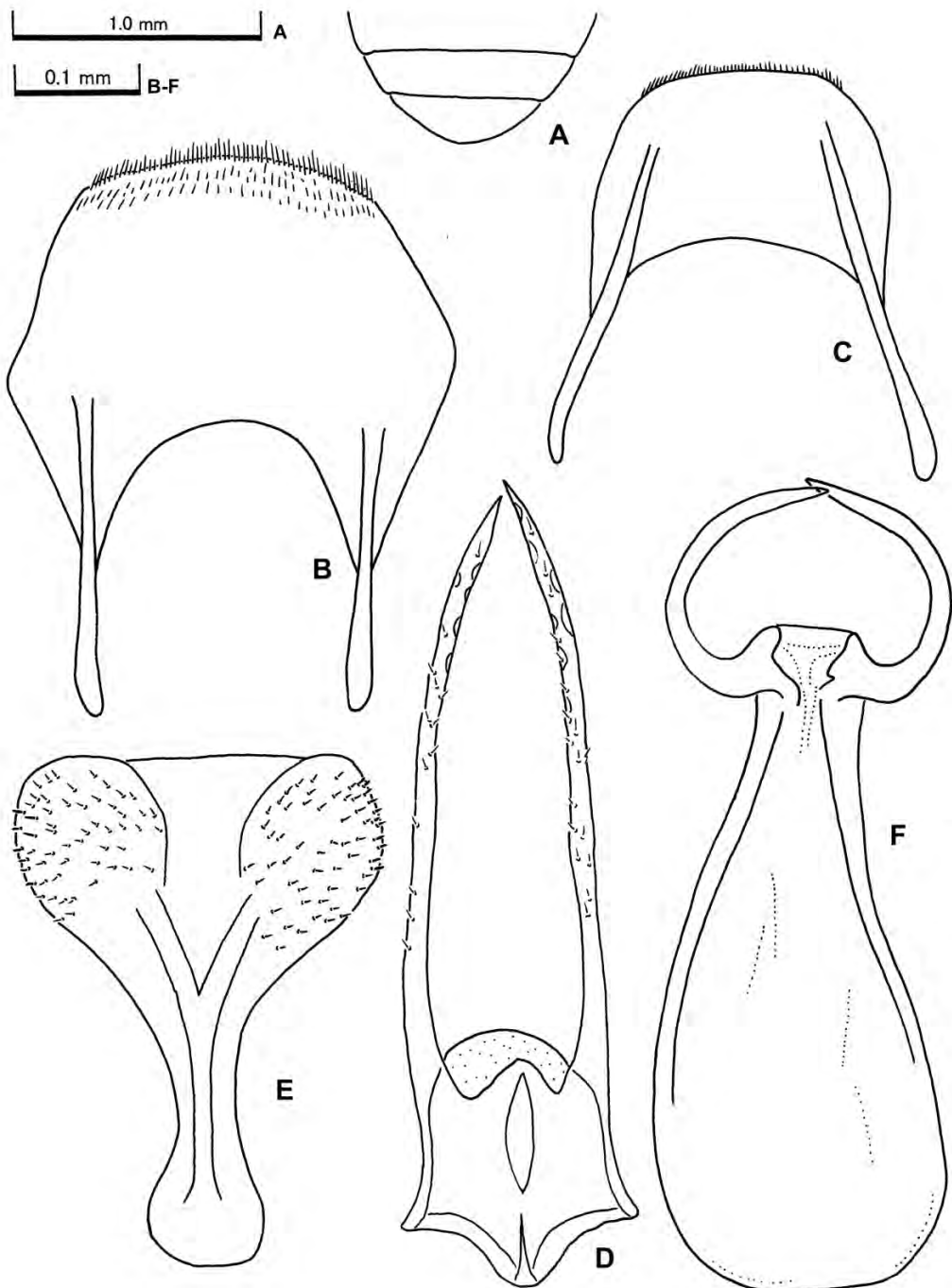


Fig. 6. *Cyphon sadanarii* sp. nov., holotype, male. — A, Sternites V–VII; B, tergite VIII; C, tergite IX; D, sternite IX; E, tegmen; F, penis.

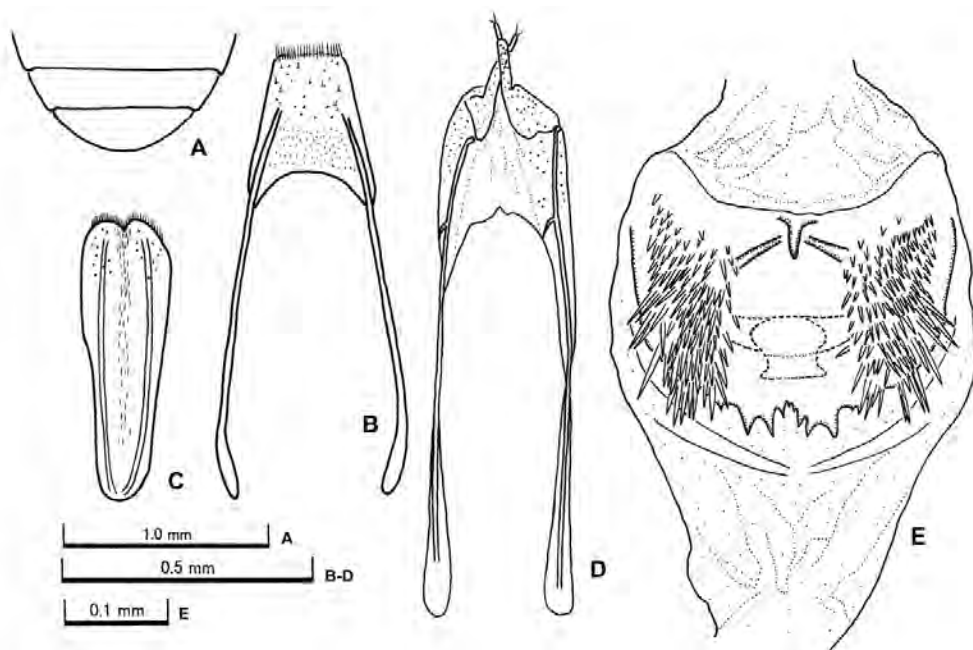


Fig. 7. *Cyphon sadanarii* sp. nov., paratype, female. — A, Sternites V–VIII; B, tergite VIII; C, sternite VIII; D, ovipositor; E, prehensor.

Etymology. This new species is dedicated to the late Dr. Sadanari HISAMATSU, who was an eminent entomologist and made a great contribution to Japanese coleopterology.

***Cyphon nepalensis* sp. nov.**

(Figs. 1E, 8)

Type material. Holotype (KUMJ), male: “(E. NEPAL) Basantapur (2,300 m) 27°07'N, 87°24'E May 8, 1972 Malaise Trap (2) Kyushu Univ. Col.”. Paratypes (KUMJ, NMW, EUMJ): 5 males, same data as for the holotype; 3 males, ditto but collecting date “May 4, 1972”; 4 males, ditto but “May 3, 1972”, genit. s. no. HY 799; 6 males, ditto but “May 10, 1972”; 7 males, ditto but “May 5, 1972”; 2 males, ditto but “May 6, 1972”; 1 male, ditto but “May 7, 1972”; 2 males, “May 5, 1972 Y. Nishida leg. Kyushu Univ. col.”, “(E. NEPAL) Basantapur (2,300 m) 27°07'N, 87°24'E”.

Description. Male. Body oval, strongly convex above, shining, closely covered with yellowish-white setae throughout. Coloration of body brown to reddish-brown; antennal segments IV–XI dark brown.

Head relatively large, lightly convex dorsally, finely granulate; clypeus short, with front margin arcuate. Eyes moderate in size, prominent; the distance between eyes about 3.4 times as long as the maximum diameter of an eye. Antennae (Fig. 8A) short, reaching about proximal 1/8 of elytra; relative length of each antennal segment ($n = 1$), 1.8 : 1.1 : 1.0 : 1.4 : 1.3 : 1.1 : 1.1 : 1.1 : 1.1 : 1.1 : 1.4. Pronotum transverse, finely punctate, strongly depressed ventrally in lateral parts; anterior and lateral margins straight; antero-lateral corners right-angled, projecting anteriorly; postero-lateral corners about 120°; posterior margin arcuate; PW/PL 2.22–2.45 (2.31). Scutellum equilateral-triangular,

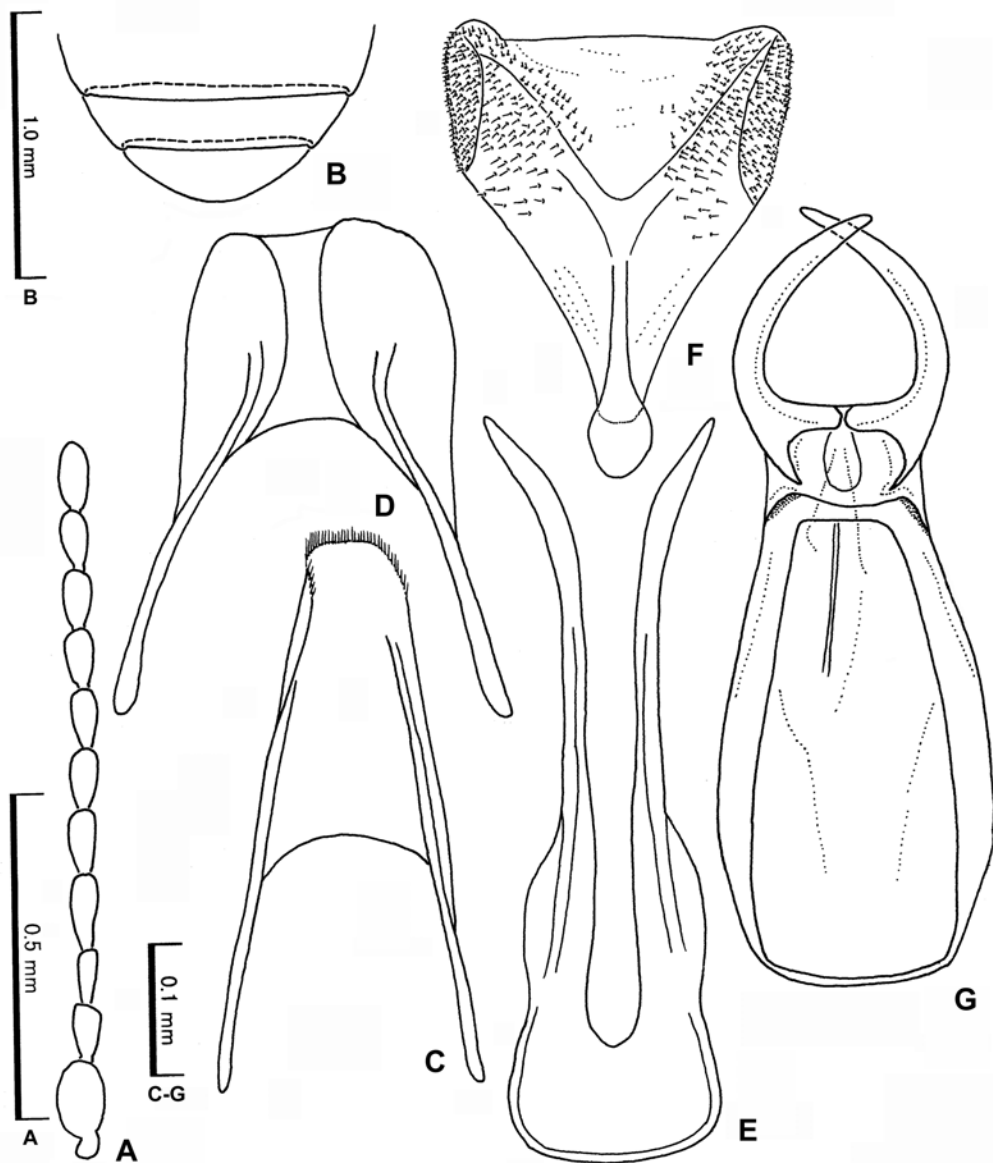


Fig. 8. *Cyphon nepalensis* sp. nov., holotype, male. — A, Antenna; B, sternites V–VII; C, tergite VIII; D, tergite IX; E, sternite IX; F, tegmen; G, penis.

punctate as on pronotum. Elytra oval, widest at middle; humeral parts gently elevated; EL/EW 1.32–1.40 (1.35); EL/PL 4.40–5.00 (4.57); EW/PW 1.43–1.53 (1.47); TL/EW 1.60–1.71 (1.64).

Caudal margin of sternite VII (Fig. 8B) arcuate. Tergite VIII (Fig. 8C) lightly sclerotized, elongate-trapezoidal, bearing short spines on apical margin, with a pair of long apodemes; tergite IX (Fig. 8D) widely membranous, with a pair of long apodemes which are lightly sclerotized. Sternite IX (Fig. 8E) well sclerotized; basal part oval, widest just

before base; a pair of long and slender projections protruding from postero-lateral corners, gently curved laterally in apical part, pointed at apices. Tegmen (Fig. 8F) relatively large, moderately sclerotized; basal part short and stout; parameres projecting postero-laterally, closely covered with minute setae. Penis (Fig. 8G) large, well sclerotized, as long as sternite IX; pala oblong, widest just before middle; parameroids indistinct, closely punctate; apical teeth large and stout, claw-like, pointed at apices, strongly curved inwardly.

Female. Unknown.

Measurements. Male (n = 9): TL 2.25–2.75 (2.45) mm; PW 0.92–1.17 (1.02) mm; PL 0.40–0.50 (0.44) mm; EL 1.85–2.25 (2.01) mm; EW 1.35–1.70 (1.49) mm.

Distribution. Nepal.

Remarks. Based on the shapes of sternite IX, this species is related to *Cyphon sadanarii* sp. nov., but differs from it as follows: 1) caudal projections of sternite IX curved laterally and lacking concavities and setae in apical parts (almost straight and covered with large concavities and setae in *C. sadanarii* sp. nov.); 2) apical teeth of penis stout (long and slender in *C. sadanarii* sp. nov.).

Etymology. The species is named after the type locality, Nepal.

5. The *erythrinus* subgroup

After KLAUSNITZER (2005a), this subgroup consisted of four Oriental species, *Cyphon erythrinus* KLAUSNITZER, 1979 (New Guinea), *Cyphon haplous* KLAUSNITZER, 1976 (Bhutan), *Cyphon unipunctatus* KLAUSNITZER, 1980 (India), and *Cyphon rotundulus* KLAUSNITZER, 1980 (India). This subgroup is characterized as follows: sternite IX wide in basal part, with postero-lateral angles projecting posteriorly; a pair of long projections protruding from caudal part of sternite IX. In the present paper two new species from Nepal are added, and *Cyphon unipunctatus* KLAUSNITZER, 1980 and *C. litiginsus* KLAUSNITZER, 1980 are redescribed.

Cyphon brevirostris sp. nov.

(Figs. 1F, 9)

Type material. Holotype (EUMJ), male: “[Central NEPAL] Chumrung (2,000 m) – Kiumrung (1,800 m) nr. Ghandrung 22. X. 1981 M. Sakai”.

Description. Male. Body oval, convex dorsally, shining, closely covered with yellowish-white setae throughout. Coloration of head and pronotum reddish-brown; antennae, legs, scutellum and elytra pale brown; ventral surface of thoraces and abdomens dark brown.

Head moderate in size, lightly convex dorsally; clypeus short, with front margin gently arcuate. Eyes moderate in size, prominent; the distance between eyes about 2.9 times as long as the maximum diameter of an eye. Pronotum transverse, depressed in lateral parts; anterior margin straight; antero-lateral corners right-angled, slightly projecting anteriorly; lateral margins lightly arcuate; postero-lateral corners about 120°; posterior margin arcuate; PW/PL 2.13. Scutellum equilateral-triangular, finely punctate. Elytra subparallel-sided near base to apical 1/4; humeral parts gently elevated; EL/EW 1.34; EL/PL 4.04; EW/PW 1.42; TL/EW 1.67.

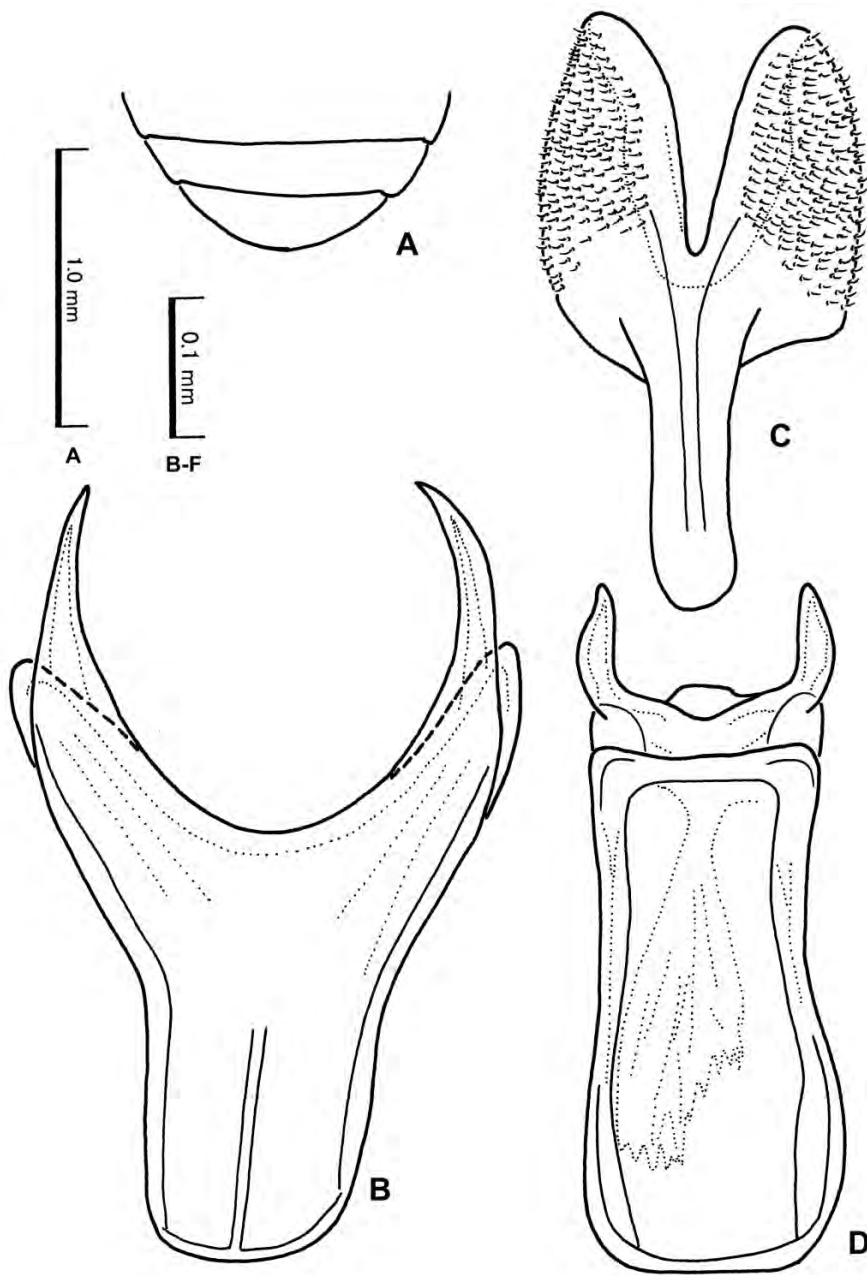


Fig. 9. *Cyphon brevirostris* sp. nov., holotype, male. — A, Sternites V–VII; B, sternite IX; C, tegmen; D, penis.

Caudal margin of sternite VII (Fig. 9A) arcuate. Tergites VIII–IX trapezoidal. Sternite IX (Fig. 9B) well sclerotized; basal part short, subparallel-sided; postero-lateral corners wide, plate-like; a pair of large projections protruding from postero-lateral parts, pointed at apices, gently curved inwardly. Tegmen (Fig. 9C) large, moderately sclerotized;

basal part long, subparallel-sided; parameres oblong, as long as basal part, closely covered with minute setae. Penis (Fig. 9D) well sclerotized, as long as tegmen; pala rectangular, right-angled in posterior corners (= parameroids); apical teeth short, arcuate, obtuse at apices.

Female. Unknown.

Measurements. Male (n = 1): TL 2.37 mm; PW 1.00 mm; PL 0.47 mm; EL 1.90 mm; EW 1.42 mm.

Distribution. Nepal.

Remarks. This species can be easily distinguished from all other members of the subgroup as follows: 1) caudal projections of sternite IX curved inwardly; 2) penis rectangular in pala with short and arcuate apical teeth.

Etymology. The species name is the combination of “brevi-“ (= short in latin) + “rostrum” (= beak in latin), referring to the shape of short apical teeth of the penis.

***Cyphon masahiroi* sp. nov.**

(Figs. 1G, 10)

Type material. Holotype (EUMJ), male: “[Singarila Ridge] Gairibas (2,600 m) the Indian frontier of E. NEPAL 1. X. 1983 M. Sakai”.

Description. Male. Body oval, convex dorsally, shining, closely covered with yellowish-white setae throughout. Coloration of head, pronotum, scutellum and ventral surface of thoraces and abdominal segments dark brown; antennae, elytra and legs brown, but hind tibiae and tarsi paler.

Head moderate in size, lightly convex above, finely granulate; clypeus short, with front margin straight. Eyes moderate in size, prominent; the distance between eyes about 2.7 times as long as the maximum diameter of an eye. Pronotum transverse, depressed ventrally in lateral parts, finely punctate; anterior margin straight; antero-lateral corners right-angled, slightly projecting anteriorly; lateral- and posterior margins gently arcuate; postero-lateral corners obtuse; PW/PL 2.21. Scutellum small, equilateral-triangular, punctate as on pronotum. Elytra oval, widest at middle; humeral parts gently elevated; EL/EW 0.98; EL/PL 3.37; EW/PW 1.56; TL/EW 1.27.

Caudal margin of sternite VII (Fig. 10A) arcuate. Tergites VIII–IX trapezoidal. Sternite IX (Fig. 10B) well sclerotized; basal part long, tapered basally, then gently expanded in basal part, arcuate in basal margin; a pair of short projections in apical margin, protruding postero-laterally. Tegmen (Fig. 10C) large, moderately sclerotized; basal part short, tapered posteriorly; parameres oblong, deeply excised in mesal part. Penis (Fig. 10D) long, well sclerotized, about 1.2 times as long as tegmen; pala oblong, widest at middle, then gently tapered apically, straight on basal margin; apical teeth curved inwardly, pointed at apices, expanded in basal parts.

Female. Unknown.

Measurements. Male (n = 1): TL 1.88 mm; PW 0.95 mm; PL 0.43 mm; EL 1.45 mm; EW 1.48 mm.

Distribution. Nepal.

Remarks. This species differs from the other members of the subgroup in having short projections on sternite IX and the basal part of the apical teeth expanded.

Etymology. This species is dedicated to Dr. Masahiro SAKAI (EUMJ).

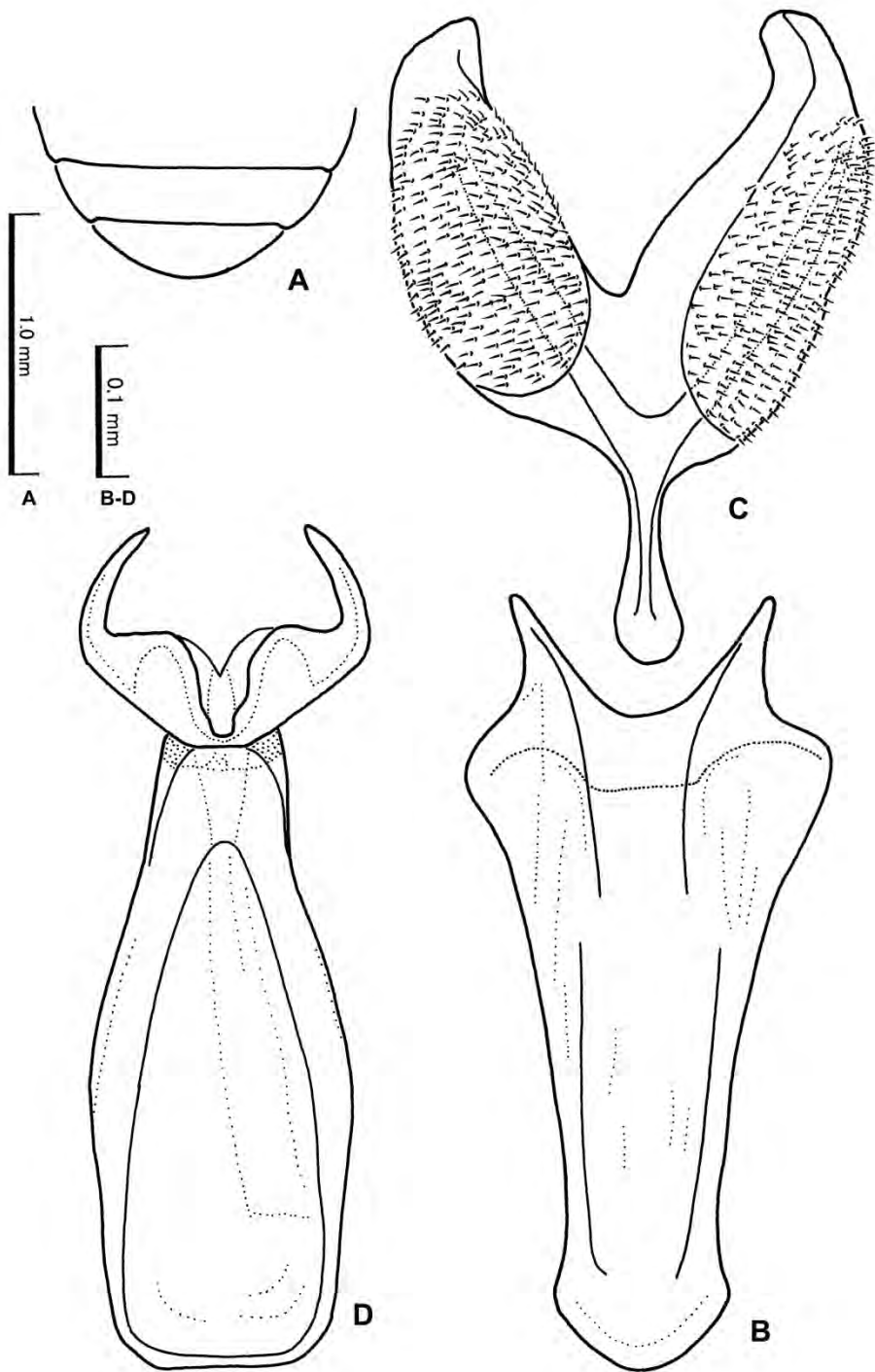


Fig. 10. *Cyphon masahiroi* sp. nov., holotype, male. — A, Sternites V–VII; B, sternite IX; C, tegmen; D, penis.

***Cyphon unipunctatus* KLAUSNITZER, 1980**

(Figs. 1H, 11)

Cyphon unipunctatus KLAUSNITZER, 1980, 212 [type locality: Assam, India; type depository: Naturhistorisches Museum Basel].

Materials examined. 2 males (EUMJ), “(INDONESIA) Ciburum, alt. 1,600 m Mt. Gede, Jawa Barat VII. 27. 1977 Shinji Nagai”; 1 male (EUMJ), “Bandar Baru N. Sumatra 15-VIII-1996 S. Ariga leg.”, genit. s. no. HY 942; 1 male (EUMJ), “[North THAI] Maeo khun klang 1350, Doi Inthanon 20. X. 1983 M. Sakai”; 2 males (NMW), “W-JAWA 17. 1. 1987 Cibodas garden leg. Jäch J11”, genit. s. no. HY 997.

Redescription. Male. Body oval, convex dorsally, shining, closely covered with yellowish-white setae throughout. Coloration of head, antennae, mouth parts, pronotum, scutellum and legs reddish-brown; elytra brown to dark brown, variable in color.

Head relatively large, slightly convex above, finely granulate; clypeus short, with straight front margin. Eyes moderate in size, prominent; the distance between eyes about 1.9 times as long as the maximum diameter of an eye. Pronotum transverse, strongly depressed in lateral parts, finely punctate; antero-lateral corners right-angled; anterior margin straight; lateral and posterior margins gently arcuate; postero-lateral corners about 120°; PW/PL 2.20–2.57 (2.37). Scutellum moderate in size, equilateral-triangular, finely punctate. Elytra oblong-oval, widest at middle; humeral parts slightly elevated; EL/EW 1.25–1.39 (1.33); EL/PL 4.20–4.76 (4.51); EW/PW 1.41–1.48 (1.43); TL/EW 1.51–1.69 (1.63)

Caudal margin of sternite VII (Fig. 11A) gently arcuate. Tergite VIII (Fig. 11B) lightly sclerotized, trapezoidal, closely covered with minute spines, bearing short spines on apical margin, with a pair of long and slender apodemes; tergite IX (Fig. 11C) widely membranous, sparsely bearing minute spines, with a pair of long and slender apodemes which are lightly sclerotized. Sternite IX (Fig. 11D) large, well sclerotized; basal part oblong, gently tapered basally; postero-lateral corners projecting, plate-like, dorsally curved; posterior margin with a pair of claw-like long projections which are pointed at apices, deeply excised between projections, bearing minute setae in basal parts of projections. Tegmen (Fig. 11E) small, lightly sclerotized; basal part long, slender; parameres as long as basal part, trapezoidal, closely covered with minute setae in postero-lateral parts. Penis (Fig. 11F) small, lightly sclerotized; pala elongate, widest at basal 1/3; apical teeth as long as pala, slender, almost straight, pointed at apices.

Female. Unkown.

Measurements. Male (n = 3): TL 2.42–2.62 (2.55) mm; PW 1.08–1.10 (1.09) mm; PL 0.42–0.50 (0.46) mm; EL 2.00–2.15 (2.08) mm; EW 1.55–1.60 (1.57) mm.

Distribution. India, Thailand, Indonesia (Jawa, Sumatra Isls.).

Remarks. This is new record from Thailand and Indonesia.

***Cyphon litigiousus* KLAUSNITZER, 1980**

(Figs. 1I, 12)

Cyphon litigiousus KLAUSNITZER, 1980, 210 [type locality: Darjeeling district, India; type depository: Naturhistorisches Museum Basel].

Material examined. 1 male (EUMJ), “[Singarila Rigde] Gairibas (2,600 m) the Indian frontier of East NEPAL 5. XI. 1981 M. Sakai”.

Fig. 11. *Cyphon unipunctatus* KLAUSNITZER, male. — A, Sternites V–VII; B, tergite VIII; C, tergite IX; D, sternite IX; E, tegmen; F, penis.

Redescription. Male. Body oval, convex dorsally, shining, closely covered with yellowish-white setae throughout. Coloration of head, pronotum and scutellum reddish-brown; antennae, mouth parts, legs and elytra brown.

Head moderate in size, slightly convex dorsally, granulate; clypeus short, with straight front margin. Eyes relatively small, prominent; the distance between eyes about 2.8 times as long as the maximum diameter of an eye. Pronotum transverse, depressed in lateral parts, finely granulate; anterior margin straight; antero-lateral corners about 80°, projecting forward; lateral margin gently arcuate; postero-lateral corners about 120°; posterior margin arcuate; PW/PL 2.57. Scutellum small, equilateral-triangular, finely punctate. Elytra oblong-oval, widest at middle; humeral parts slightly elevated; EL/EW 1.43; EL/PL 5.41; EW/PW 1.47; TL/EW 1.69.

Caudal margin of sternite VII (Fig. 12A) arcuate. Tergite VIII (Fig. 12B) wide, trapezoidal; tergite IX lightly sclerotized, trapezoidal, bearing short spines on caudal margin, with a pair of long and slender apodemes. Sternite IX (Fig. 12C) well sclerotized; basal part oblong, evenly widened posteriorly; postero-lateral corners projecting, plate-like; mesal projections long, distinctly longer than postero-lateral projections, gently curved outwardly. Tegmen (Fig. 12D) moderately sclerotized, small; parameres oval, closely covered with minute setae. Penis (Fig. 12E) well sclerotized, about 1.3 times as long as tegmen; pala oval, widest at middle; parameroids long, almost straight, pointed at apices, serrate in inner margin of near apices.

Female. Unknown.

Measurements. Male (n = 1): TL 2.37 mm; PW 0.95 mm; PL 0.37 mm; EL 2.00 mm; EW 1.40 mm.

Distribution. India, Nepal.

Remarks. KLAUSNITZER (2005a) did not mention the status of this species, but it surely belongs to the *coarctatus* species-group.

Judging from the shape of sternite IX, this species is related to *Cyphon erythrinus* KLAUSNITZER, 1979 known from New Guinea, but differs from it by the shapes of the tegmen and penis.

This is the first record from Nepal.

6. The *magicus* subgroup

After KLAUSNITZER (2005a), this subgroup consists of three Oriental species, *Cyphon baloghi* KLAUSNITZER, 1978 (New Guinea), *Cyphon simulans* KLAUSNITZER, 1978 (New Guinea), and *Cyphon magicus* KLAUSNITZER, 1973 (Taiwan, Japan). The subgroup is characterized as follows: 1) sternite IX reduced in basal part, U-shaped; 2) pala of penis tapered basally; 3) apical teeth of penis long and slender. No species is examined in this study.

7. The *maculipennis* subgroup

After KLAUSNITZER (2005a, b), this subgroup consists of two Oriental species, *Cyphon maculipennis* KLAUSNITZER, 1968 (Philippines: Luzon Isl.), and *Cyphon hiebei* KLAUSNITZER, 1973 (Philippines: Luzon Isl.). The subgroup is characterized as follows: sternite IX rod-like in basal part, with a pair of short projections in caudal part. In this paper, *Cyphon maculipennis* KLAUSNITZER is redescribed based on an additional material.

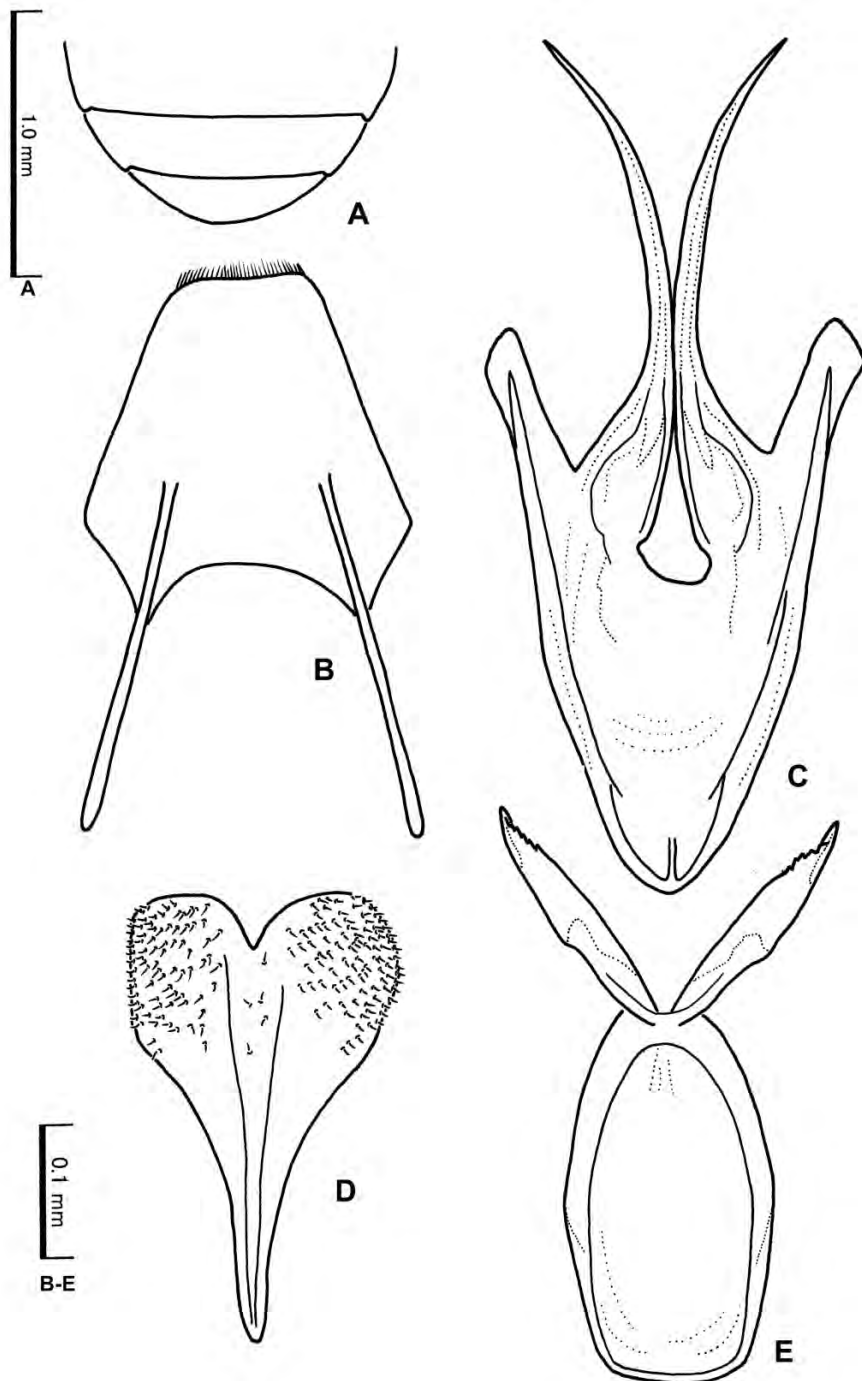


Fig. 12. *Cyphon litigiosus* KLAUSNITZER, male. — A, Sternites V–VII; B, tergite VIII; C, sternite IX; D, tegmen; E, penis.

***Cyphon maculipennis* KLAUSNITZER, 1968**
(Figs. 1J, 13)

Cyphon maculipennis KLAUSNITZER, 1968, 1 [type locality: Luzon; type depository: Staatliches Museum, Dresden].

Material examined. 1 male (EUMJ), “Luzon: PHILIPPINES Mt. Pugu (1,900 m) nr. Bontoc Mount. Pv 20. VII. 1985 M. Sakai leg.”, genit. s. no. HY 968.

Redescription. Male. Body oval, convex dorsally, shining, closely covered with yellowish-white setae throughout. Coloration of head, pronotum, scutellum and ventral surfaces of thoraces and abdomens reddish-brown; elytra blackish-brown, but humeral parts pale brown; antennae, mouth parts and legs pale brown.

Head moderate in size, flat in dorsal surface, finely granulate; clypeus short, with straight front margin. Eyes moderate in size, strongly prominent; the distance between eyes about 2.5 times as long as the maximum diameter of an eye. Antennae short and slender, reaching about proximal 1/4 of elytra. Pronotum transverse, depressed ventrally in lateral parts, granulate; antero-lateral corners about 75°, projecting forward; anterior and lateral margins straight; postero-lateral corners about 120°; posterior margin gently arcuate; PW/PL 2.50. Scutellum moderate in size, equilateral-triangular, finely punctate. Elytra oblong, subparallel-sided near base to apical 1/3; humeral parts gently elevated; EL/EW 1.40; EL/PL 5.25; EW/PW 1.50; TL/EW 1.67.

Caudal margin of sternite VII (Fig. 13A) arcuate. Tergite IX (Fig. 13B) lightly sclerotized, densely bearing short spines in apical parts, with a pair of long and slender apodemes. Sternite IX (Fig. 13C) large, well sclerotized; basal part rod-like, slightly expanded in basal part; caudal part wide, with a pair of large projections protruding from postero-lateral corners, which are curved inwardly, bearing short setae on lateral margins. Tegmen (Fig. 13D) small, moderately sclerotized; proximal part short, gently tapered posteriorly; parameres elongate, with lateral margin almost straight, deeply concave in mesal part of apical margin, bearing short setae in apical 1/2. Penis (Fig. 13E) relatively large, moderately sclerotized, about 1.2 times as long as tegmen; pala oblong, subparallel-sided, arcuate on basal margin; apical teeth long, gently curved inwardly.

Female. Unknown.

Measurements. Male (n = 1): TL 2.50 mm; PW 1.00 mm; PL 0.40 mm; EL 2.10 mm; EW 1.50 mm.

Distribution. Philippines (Luzon Isl.)

8. The *pavens* subgroup

This subgroup consists of only *Cyphon pavens* KLAUSNITZER, 1980 (New Guinea). The subgroup is characterized as follows: sternite IX provided with a pair of apodemes in basal part, with a pair of short projections in caudal part; apical teeth of penis very long. No species is examined in this study.

9. The *thaleri* subgroup

This subgroup consisted of two Oriental species, *Cyphon dolini* KLAUSNITZER, 2005 (Myanmar) and *Cyphon thaleri* KLAUSNITZER, 2005 (Myanmar, China: Yunnan). The subgroup is characterized as follows: sternite IX subparallel-sided in basal part, with a pair

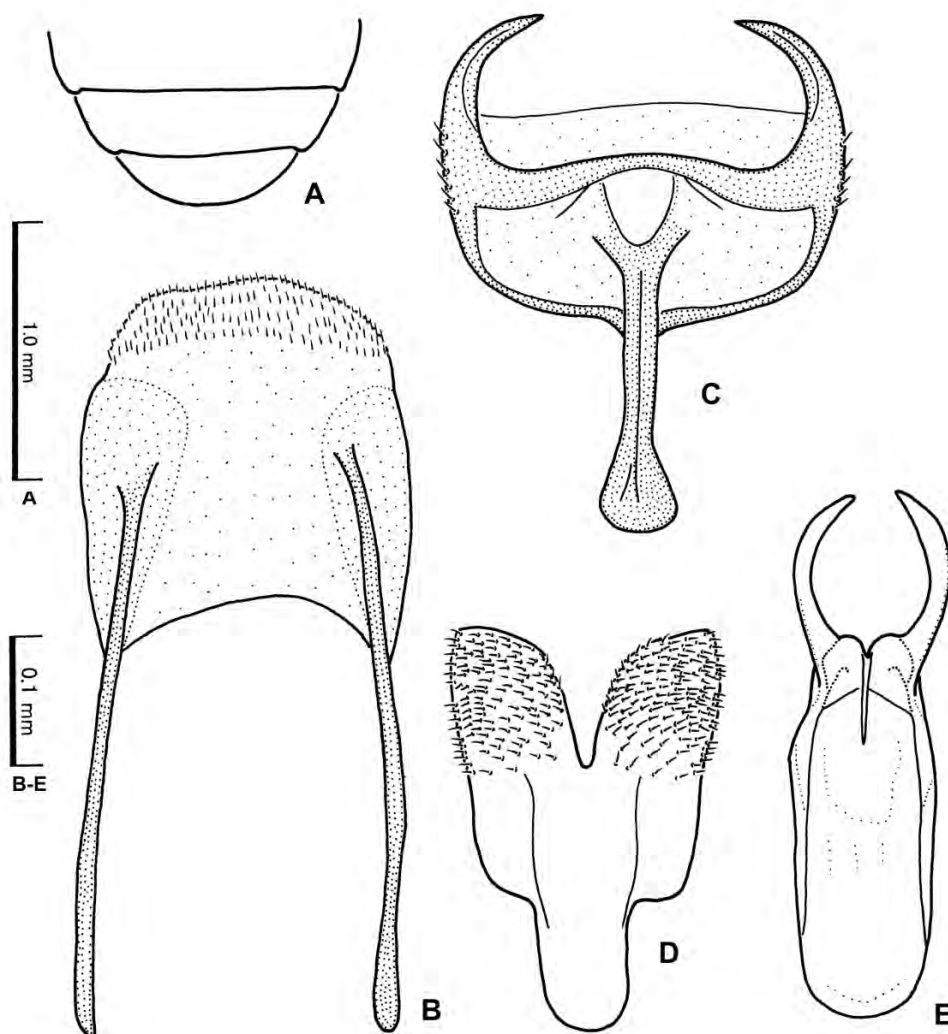


Fig. 13. *Cyphon maculipennis* KLAUSNITZER, male. — A, Sternites V–VII; B, tergite IX; C, sternite IX; D, tegmen; E, penis.

of projections protruding from postero-laterally. In this study, an additional new species is described.

***Cyphon baoshanensis* sp. nov.**

(Figs. 1K, 14)

Type material. Holotype (CPE), male: “CHINA: Yunnan [CH07-14], Baoshan Pref., Gaoligong Shan, 33 km SE Tengchong, 2,100–2,200 m, 24°51′22″N, 98°45′36″E, decid. forest, litter, wood, fungi sifted, 31. V. 2007, leg. A. Pütz”.

Description. Male. Body oval, convex dorsally, shining, closely covered with yellowish-white setae throughout. Coloration of head, antennae, pronotum and ventral

surfaces of thoraces and abdomen blackish-brown, but pale brown in antennal segments II–III; mouth parts, elytra and legs brown, but darker in femur.

Head relatively large, slightly convex dorsally, granulate; clypeus short, with straight front margin. Eyes large, strongly prominent; the distance between eyes about 1.9 times as long as the maximum diameter of an eye. Antennae short, reaching just proximal margin of elytra. Pronotum transverse, depressed ventrally in lateral parts, granulate; anterior margin straight; antero-lateral corners right-angled, slightly projecting forward; lateral and posterior margins gently arcuate; postero-lateral corners about 120°; PW/PL 2.27. Scutellum small, equilateral-triangular; humeral parts gently elevated. Elytra oval, widest at middle; humeral parts gently elevated; EL/EW 1.54; EL/PL 4.44; EW/PW 1.27; TL/EW 1.88.

Caudal margin of sternite VII (Fig. 14A) gently arcuate. Tergite VIII (Fig. 14B) lightly sclerotized, trapezoidal, bearing short spines in apical part, with a pair of long apodemes. Tergite IX (Fig. 14C) lightly sclerotized, trapezoidal, closely covered with minute furrows, with a pair of long apodemes. Sternite IX (Fig. 14D) well sclerotized, large; basal part oblong, subparallel-sided, projecting posteriorly in median part of basal margin; a pair of long projections protruding from postero-lateral corners, pointed at apices, curved inwardly, sparsely covered with short setae; a membranous long projection attached to mesal part of caudal margin. Tegmen (Fig. 14E) large, slightly sclerotized, about 0.9 times as long as penis; parameres wide, trapezoidal, closely covered with minute setae which are longer in mesal part. Penis (Fig. 14F) long, well sclerotized; pala oblong, subparallel-sided, arcuate in basal margin; parameroids indistinct; apical teeth long, evenly curved inwardly, with small teeth in basal part of apical teeth.

Female. Unknown.

Measurements. Male (n = 1): TL 2.45 mm; PW 1.02 mm; PL 0.45 mm; EL 2.00 mm; EW 1.30 mm.

Distribution. China (Yunnan).

Remarks. This species is closely related to *Cyphon thaleri* KLAUSNITZER, 2005, but differs from it as follows: 1) caudal projections of sternite IX evenly curved inwardly (strongly curved basally in *thaleri*); 2) apical teeth long, with small teeth in basal part (short and lacking small teeth in *thaleri*).

Etymology. This species is named after the type locality, Baoshan Pref., China.

10. The *loebli* subgroup

This subgroup consists of two Chinese species, *Cyphon schawalleri* KLAUSNITZER, 2006 (Yunnan) and *Cyphon loebli* KLAUSNITZER, 2006 (Yunnan). This is a distinct subgroup characterized as follows: 1) penis with apical teeth long and slender; 2) tegmen shorter in parameres; 3) tergites VIII–IX tending to reduction; 4) sternite IX U-shaped, tending to reduction. No species is examined in this study.

11. The *tetranematus* subgroup

This subgroup is newly established on the basis of the following new species, and is characterized as follows: 1) tergite VIII normally trapezoidal; 2) sternite IX with three pairs of projections, of these two pairs long and protruding posteriorly; 3) tegmen H-shaped; 4) penis with long pala, and with short and straight apical teeth. This subgroup is probably related to the *carus* subgroup judging from the similar shapes of sternite IX, but

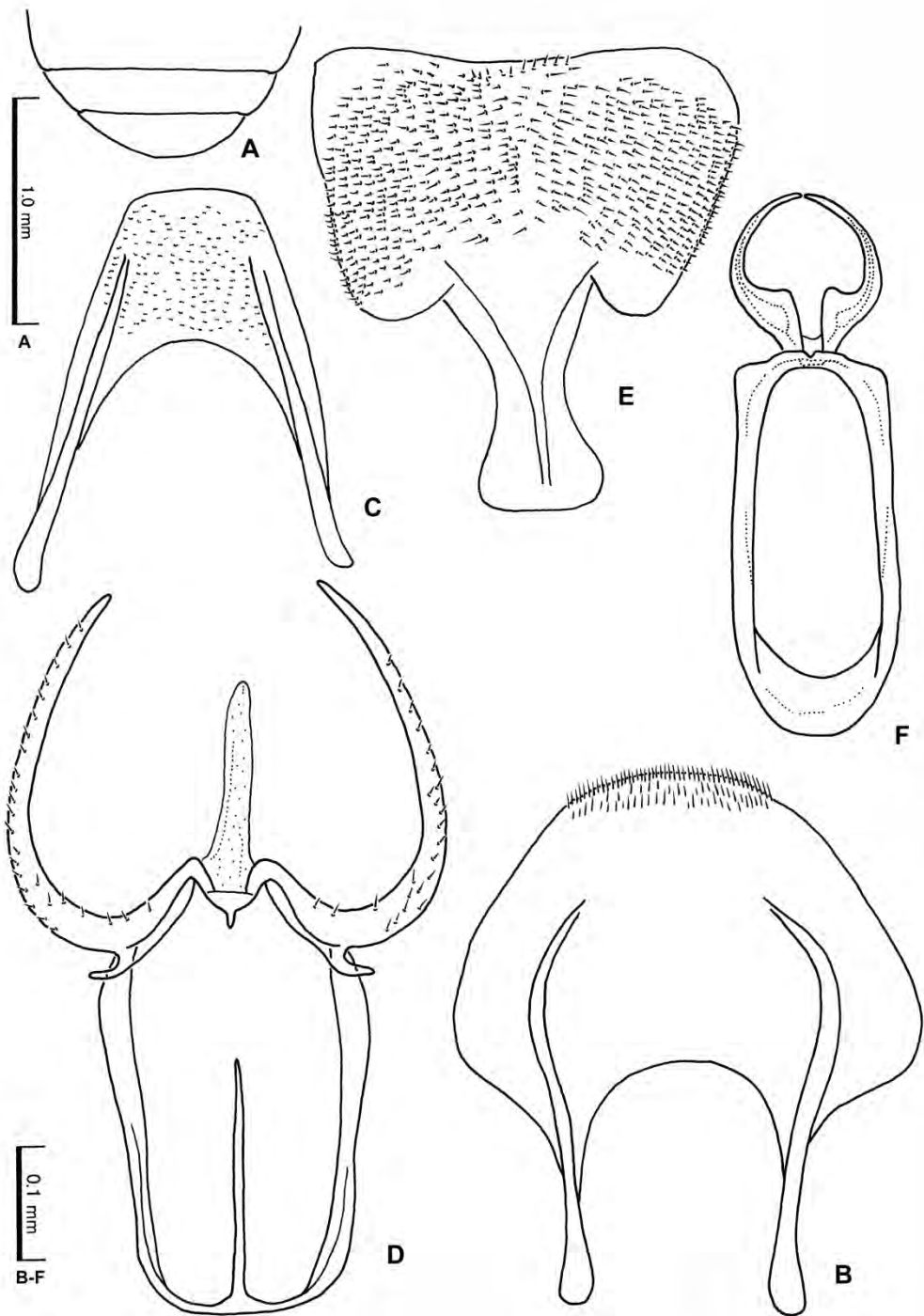


Fig. 14. *Cyphon baoshanensis* sp. nov., holotype, male. — A, Sternites V–VII; B, tergite VIII; C, tergite IX; D, sternite IX; E, tegmen; F, penis.

is easily distinguishable from it by having two pairs of caudal projections on sternite IX and an H-shaped tegmen.

***Cyphon tetranematus* sp. nov.**

(Figs. 1L, 15)

Type material. Holotype (NMW), male: “S Thailand, Betong Gunung Cang dun vill. Yala dist., 25. 3. –22. 4. 1993 J. Horák leg.”.

Description. Male. Body oval, convex dorsally, shining, closely covered with yellowish-white setae throughout. Coloration of body reddish-brown, but antennae and legs pale brown.

Head relatively large, slightly convex dorsally, finely granulate; clypeus short, gently arcuate in front margin. Eyes moderate in size, gently projecting; the distance between eyes about 2.3 times as long as the maximum diameter of an eye. Antennae slender, reaching to about proximal 1/6 of elytra. Pronotum transverse, depressed ventrally in lateral parts, granulate; anterior and lateral margins straight; antero-lateral corners right-angled, gently projecting forward; postero-lateral corners about 120°; posterior margin gently arcuate; PW/PL 2.13. Scutellum moderate in size, equilateral-triangular, finely punctate. Elytra oval, widest at just before middle; humeral parts gently elevated; EL/EW 1.26; EL/PL 3.83; EW/PW 1.42; TL/EW 1.60.

Caudal margin of sternite VII arcuate. Tergite VIII (Fig. 15A) moderately sclerotized, trapezoidal, bearing short spines and setae in apical parts, with a pair of long apodemes; tergite IX (Fig. 15B) moderately sclerotized, longitudinal trapezoidal, bearing short spines and setae in apical part, with a pair of long apodemes. Sternite IX (Fig. 15C) well sclerotized in lateral parts; lateral margin with a pair of short projections in proximal 1/2; apical part with two pairs of long projections; outer projections short, immediately curved inwardly in apical parts which are covered with minute spines; inner projections long, gently curved inwardly in apical part, with a pair of minute seta in apical part. Tegmen (Fig. 15D) moderately sclerotized, H-shaped; basal part short; a pair of long projections protruding antero-laterally; parameres slender, covered with minute setae in lateral parts. Penis (Fig. 15E) moderately sclerotized, as long as tegmen; pala long and slender, subparallel-sided; apical teeth short and straight.

Female. Unknown.

Measurements. Male (n = 1): TL 1.93 mm; PW 0.85 mm; PL 0.40 mm; EL 1.53 mm; EW 1.21 mm.

Distribution. Thailand.

Remarks. This is a distinct species with strangely shaped sternite IX and tegmen.

Etymology. The species name is the combination of “tetra-“ (= four in Greek) + “nema” (= string in Greek), referring to the shape of the two pairs of long projections on sternite IX.

12. The *formosanus* subgroup

I propose this new subgroup for two Oriental species, *Cyphon topali* KLAUSNITZER, 1980 (Vietnam) and *Cyphon formosanus* PIC, 1918 (Taiwan, Japan). This subgroup is characterized as following male genitalia: 1) tergite IX tending to reduction; 2) sternite IX rod-like in basal part, plate-like in caudal part, lacking distinct projection. The male genitalia of *C. formosanus* are described by YOSHITOMI (2005).

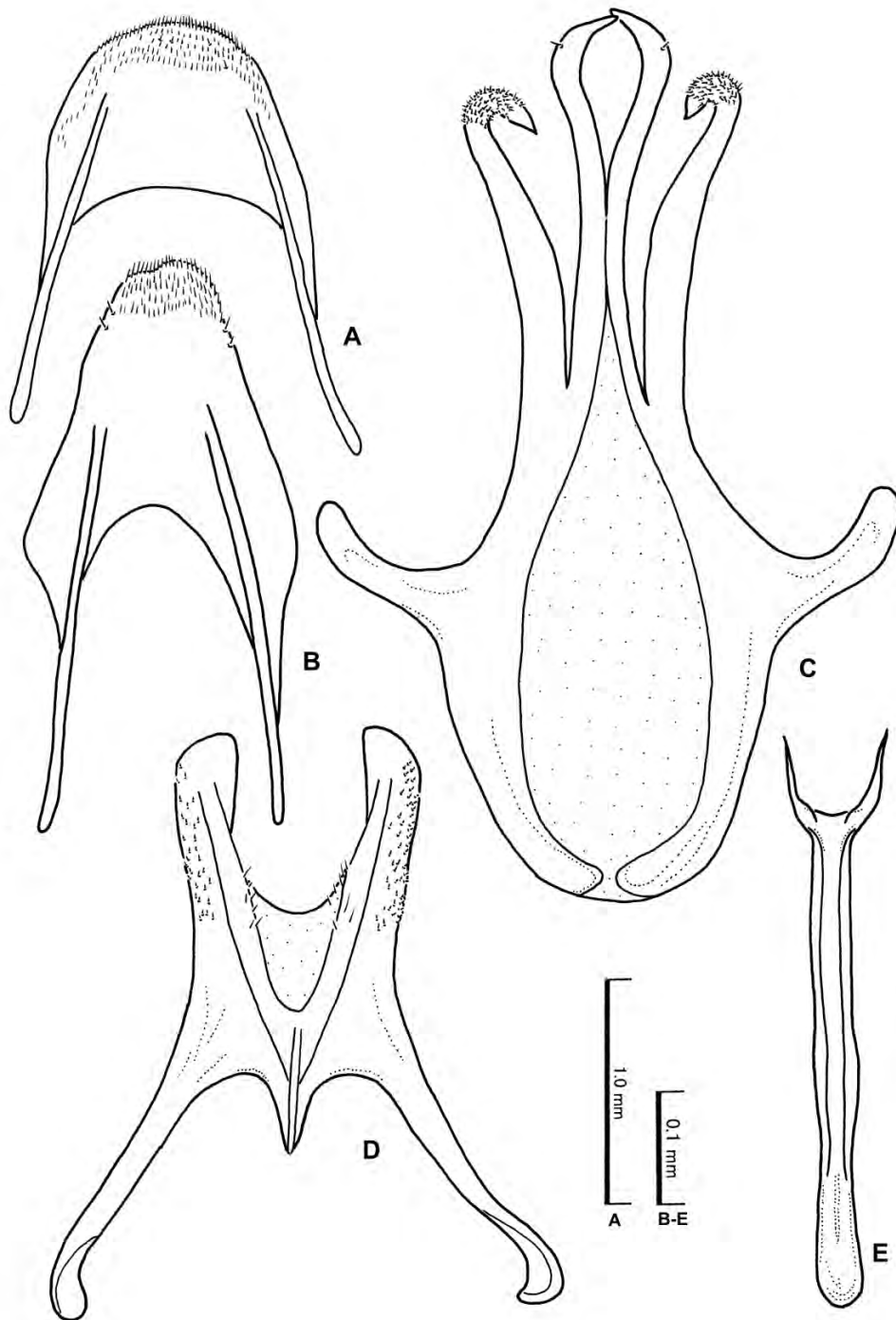


Fig. 15. *Cyphon tetranematus* sp. nov., holotype, male. — A, Tergite VIII; B, tergite IX; C, sternite IX; D, tegmen; E, penis.

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